

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/19495

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F16J 15/40
US CL : 277/409, 411, 412, 413, 414, 415, 418

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 277/409, 411, 412, 413, 414, 415, 418

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0107181 A1 (WEIGHARDT) 12 June 2003 (12.06.2003), Figure 2.	1-4
A	US 5,704,614 A (SANDERS et al) 06 January 1998 (06.11.1998).	1-4

Further documents are listed in the continuation of Box C.

See patent family annex.

Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance
"E"	earlier application or patent published on or after the international filing date
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O"	document referring to an oral disclosure, use, exhibition or other means
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"&"	document member of the same patent family

Date of the actual completion of the international search

26 May 2005 (26.05.2005)

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15 JUL 2005

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